

ABSTRACT OF THE DISCLOSURE

To effectively suppress a signal in a low frequency region in which the medium noise and the signal distortion are concentrated, and in order to effectively utilize a detected component of the reproduced signal in the low frequency region, a target of partial response equalization to the perpendicularly recorded/reproduced signal is set so that the low-frequency component around the direct current is suppressed to a regulated quantity for both the effective suppression and the effective utilization. Accordingly, a maximum-likelihood decoding process is carried out through the target of partial response equalization. Reliability of data detection is made higher and a signal-to-noise ratio is improved, so that the noise from the recording medium can be reduced more and it is possible to provide a high-density magnetic recording/reproducing apparatus.

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